

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)	
)	
Amendment of Part 2 of the Commission's Rules to)	
Allocate Spectrum Below 3 GHz for Mobile and)	ET Docket No. 00-258
Fixed Services to Support the Introduction of New)	
Advanced Wireless Services, including Third)	
Generation Wireless Systems)	
)	
Amendment of Section 2.106 of the Commission's)	ET Docket No. <u>95-18</u>
Rules to Allocate Spectrum at 2 GHz for Use)	
By the Mobile-Satellite Service)	
)	
The Establishment of Policies and Service Rules)	
For the Mobile-Satellite Service in the 2 GHz Band)	IB Docket No. 99-81
)	
Petition for Rule Making of the Wireless)	
Information Networks Forum Concerning the)	RM-9498
Unlicensed Personal Communications Service)	
)	
Petition For Rule Making of UTStarcom, Inc.)	RM-10024
Concerning the Unlicensed Personal)	
Communications Service)	

To the Commission:

COMMENTS OF NUCENTRIX BROADBAND NETWORKS, INC.

Nucentrix Broadband Networks, Inc. ("Nucentrix") hereby submits these comments in response to the Further Notice of Proposed Rulemaking ("FNPRM") in the above-captioned proceeding.¹ In the FNPRM, the Commission is exploring the possibility of introducing new advanced wireless services in various frequency bands including those currently designated for the

¹ Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Services, including Third Generation Wireless Systems, ET Docket No. 00-258, FCC 01-224, 66 Fed. Reg. 47618-47621, *Memorandum Opinion and Order and Further Notice of Proposed Rulemaking* (rel. Aug. 20, 2001) ("FNPRM").

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Mobile Satellite Service, the Unlicensed Personal Communications Service, the Amateur Radio Service, and the Multipoint Distribution Service (“MDS”). These comments focus on issues associated with the possible relocation of incumbent MDS licensees.

I. INTRODUCTION

Nucentrix is the third largest holder of spectrum rights in the 2150-2162 MHz (“2.1 GHz”)² and the 2500-2690 MHz (“2.5 GHz”)³ bands (collectively the “MDS/ITFS” bands) in the United States. Nucentrix holds MDS/ITFS licenses and spectrum leases in over 90 primarily rural markets covering an estimated 9 million households.⁴

MDS/ITFS spectrum rights are at the very core of Nucentrix’s business. Nucentrix’s sole mission is to provide low cost, reliable, advanced wireless data and voice services over frequencies in the MDS/ITFS bands. Such services will provide a much-needed competitive alternative to wireline services such as digital subscriber line and cable modem service currently being deployed in more densely populated regions of the country. More importantly, given Nucentrix’s focus on rural and underserved areas where advanced wireline services are severely limited or completely unavailable, Nucentrix may offer the *only* broadband service available to many of the homes, offices, and businesses in its region for the foreseeable future.⁵

² In the 50 largest U.S. markets, 2.1 GHz licensees use two six-megahertz channels: channel 1 at 2150-2156 MHz and channel 2 at 2156-2162 MHz. In the rest of the country, channel 2 is replaced by a four-megahertz channel 2A at 2156-2160 MHz. *See* 47 C.F.R. § 21.901 (2000).

³ The 2.5 GHz band consists of 190 megahertz of spectrum. MDS and Multichannel Multipoint Distribution Service licensees are allotted 66 MHz of spectrum, and Instructional Television Fixed Service (“ITFS”) licensees are allotted 120 megahertz of spectrum. In addition, four megahertz of spectrum in the 2686-2690 MHz band is allotted for response channels.

⁴ The states in which Nucentrix holds licenses and spectrum leases include Arkansas, Arizona, Florida, Illinois, Iowa, Kansas, Kentucky, Missouri, Ohio, Oklahoma, Pennsylvania, Texas, West Virginia, and Wyoming.

⁵ *See* FCC Staff Report, *Spectrum Study of the 2500-2690 MHz Band: The Potential for*

Nucentrix has invested over \$330 million in licenses, spectrum leases, and infrastructure for its broadband and wireless cable operations, including amounts paid at the Commission's Basic Trading Area auction, pursuant to which Nucentrix acquired the overwhelming majority (90%) of its 2.1 GHz licenses. Nucentrix also has engineered band plans and network designs for 70 markets in more than 400 applications filed with the FCC to commence the rollout of broadband services. In addition, Nucentrix devoted substantial human and capital resources in renegotiating spectrum lease agreements to support its broadband wireless services.

Significantly, in virtually all of the markets where it is licensed, Nucentrix relies heavily on channels in the 2.1 GHz band for the efficient delivery of advanced wireless services. All of Nucentrix's existing two-way networks use this band, and 99% of Nucentrix's networks for which two-way applications are on file with the Commission have been designed around the use of the 2.1 GHz band. Thus, the 2.1 GHz band is essential for the deployment of broadband services in Nucentrix's markets.

Nucentrix applauds the Commission's recent decision to eliminate the 2.5 GHz band as a possible candidate for relocation to accommodate third generation ("3G") mobile wireless services.⁶ The Commission's decision removes much of the uncertainty regarding the future of the MDS/ITFS bands, and allows Nucentrix to resume funding its networks and deploying digital broadband services in the markets it serves. Nucentrix greatly appreciates the hard work and thoughtful consideration given to this issue by the Commissioners and their staff. However, the 2.1 GHz band

Accommodating Third Generation Mobile Systems, Interim Report at 22 (Nov. 15, 2000) ("in rural or otherwise underserved markets in the country, ITFS/MDS may be the sole provider of broadband service").

⁶ See Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems, ET Docket No. 00-258, FCC 01-256, *First Report and Order and Memorandum Opinion and Order* (rel. Sept. 24, 2001) ("First Report and Order").

is no less critical to satisfying the Commission's important policy objective of fostering a third, competitive alternative for broadband services.

II. DISCUSSION

At the outset, Nucentrix wants to emphasize that while it may be tempting to view the 2.1 GHz band as a mere appendage that can be severed and removed from the larger 2.5 GHz band with little or no adverse effect, in fact, the opposite is true. As discussed above, the use of 2.1 GHz band is essential to the success of two-way, broadband wireless deployment in the United States.⁷ Nonetheless, Nucentrix acknowledges the difficult task faced by the Commission and other government agencies in identifying additional spectrum for advanced wireless services, including 3G. Nucentrix also recognizes that the Commission, along with the National Telecommunications and Information Administration, Department of Defense, and other Executive Branch agencies recently developed a plan to identify additional spectrum for such services that includes the 2110-2170 MHz band.⁸ Accordingly, Nucentrix is willing to consider a possible relocation of its 2.1 GHz licenses to other comparable spectrum *as long as* certain important safeguards are put into place. Specifically, adoption of the safeguards advocated by the Wireless Communications Association International ("WCA") in comments that WCA is filing with the Commission in this proceeding today would be necessary for Nucentrix to be able to support any such relocation. To supplement WCA's discussion of these safeguards, Nucentrix also wishes to highlight the following issues:

⁷ See also Comments of Nucentrix Broadband Networks, Inc., ET Docket No. 00-258, at 20-22 (filed Feb. 22, 2001), and Reply Comments of Nucentrix Broadband Networks, Inc., ET Docket No. 00-258, at 13-14 (filed Mar. 9, 2001).

⁸ See Press Release from the United States Department of Commerce, National Telecommunications and Information Administration, "*NTIA Statement Regarding New Plan To Identify Spectrum for Advanced Wireless Mobile Services (3G)*", (rel. Oct. 5, 2001) http://www.ntia.doc.gov/ntiahome/threeg/3gplan_100501.htm.

A. Prompt Resolution Of This Issue Is Critical. In its comments, WCA urges the Commission to resolve the 2.1 GHz relocation issue quickly to remove the last cloud of uncertainty that hangs over deployment of MDS/ITFS broadband systems. Prompt action is particularly important to Nucentrix because Nucentrix's entire business depends on the use of the 2.1 and 2.5 GHz bands. The Commission's decision to remove the 2.5 GHz band from further consideration as a candidate for 3G services should restore Nucentrix's access to capital markets. However, a speedy resolution of this last area of uncertainty is necessary for Nucentrix to fully fund its broadband deployment plans.

B. Costs of Replacing Customer Premises Equipment Will Be Particularly High In Rural Areas. In its comments, the WCA notes that because 2.1 GHz equipment already will have been deployed on a mass market basis at the time any relocation occurs, it will be necessary for commercial operators to complete potentially millions of truck rolls and equipment change-outs. Replacing customer premises equipment will be particularly expensive in the rural markets served by Nucentrix. With fewer homes and businesses per square mile in such areas, the per subscriber costs of labor, fuel, and other related costs will be even greater for Nucentrix than they will for commercial operators in more densely populated urban areas.

C. A Uniform Migration Plan Is Essential. In its comments, the WCA raises concerns with the possible "Balkanization" of MDS/ITFS deployment. This issue is of particular concern to Nucentrix because any future mobile use of the 2.1 GHz band will almost certainly occur in urban areas before it occurs in rural areas. Indeed, some rural areas may never be built-out by mobile service providers. If incumbent licensees in the 2.1 GHz band are migrated to other spectrum on a piecemeal basis (with rural licensees being the last to be moved), equipment manufacturers likely will focus their attention on the larger urban markets, leaving companies

like Nucentrix that serve smaller rural markets with few, if any, low-cost equipment alternatives. In addition, the existence of multiple licensees operating in the 2.1 GHz band across the nation will make interference coordination between urban areas and rural outskirts extremely complex if these licenses are relocated on a “pick and choose” basis. Thus, it is essential that any relocation plan provide for the migration of *all* 2.1 GHz licensees at the same time.

D. Coordination with Mexico and Canada Must Be Completed Before Any Relocation Takes Place. Any relocation plan involving the 2.1 GHz band must be coordinated with Mexico and Canada. Five Nucentrix markets are near the Mexican border (El Paso, George West, Jourdanton/Charlotte, Kingsville, and Laredo, Texas). One Nucentrix market, Bucyrus, Ohio, is near the Canadian border. Because of the proximity of Nucentrix’s markets to the Mexican and Canadian borders, relocation of 2.1 GHz operations to another band may require that the Commission engage in a frequency coordination process with those countries. Given that there are numerous international agreements governing the deployment of wireless services along the U.S.-Mexican and U.S.-Canadian borders, frequency coordination may be complex and time-consuming. Moreover, there is no guarantee that the Commission would be successful in reaching agreements that are compatible with the technical parameters needed by Nucentrix and other companies operating in border markets to successfully deploy service. Thus, the Commission must resolve these very important issues *before* it implements any decision to move incumbent 2.1 GHz licensees.

E. The Flexible Use Allocation Should Be Extended to 2.1 GHz or Replacement Spectrum. In light of the Commission’s decision in the First Report and Order to add a flexible use allocation to the 2.5 GHz band, it would be appropriate for the Commission to add the same allocation to the 2.1 GHz band (or any replacement spectrum if such spectrum can be identified). The same public interest benefits of new technology development and efficient use of spectrum that

were articulated in the First Report and Order will be achieved by the addition of a flexible use allocation in the 2.1 GHz band. Furthermore, as the record in this proceeding clearly demonstrates, the two bands are used together to deliver the same broadband services and, therefore, the same service rules should apply to both bands.

III. CONCLUSION

The Commission and the MDS/ITFS industry have gone to extraordinary lengths to create the regulatory framework to place affordable broadband access within the reach of all Americans.

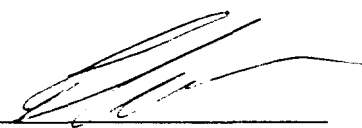
Any attempt to relocate incumbents in the 2.1 GHz band must take into account the concerns expressed by Nucentrix and WCA to ensure that MDS/ITFS operators can deploy advanced wireless services on a reasonable and timely basis nationwide.

Respectfully submitted,

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October 22, 2001

CERTIFICATE OF SERVICE

I, Shelia Wright, hereby certify that on this 22 day of October 2001, I caused copies of the foregoing Comments by Nucentrix Broadband Networks, Inc. to be hand-delivered to the following persons through the Commission's Capitol Heights facility located at 9300 East Hampton Drive, Capitol Heights, MD 20743.

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